Cyber-Twin® SE

OWNER'S MANUAL

Fender®

www.fender.com

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CORONA, CA USA

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Important Safety Instructions

• This symbol warns the user of dangerous voltage levels localized within the enclosure of the unit.

• This symbol advises the user to read all accompanying literature for safe operation of the unit.

- Read, retain, and follow all instructions. Heed all warnings.
- Only connect the electric line cord to an earth grounded AC receptacle in accordance with the voltage and frequency ratings listed under INPUT POWER on the rear panel of this product.
- **WARNING:** To prevent damage, fire or shock hazard, do not expose this unit to rain or moisture.
- Unplug the AC power line cord before cleaning the unit exterior (use a damp cloth only). Wait until the unit is completely dry before reconnecting it to power.
- Maintain at least 6 inches of unobstructed air space behind the unit to allow for proper ventilation and cooling of the unit.
- This product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
- This product may be equipped with a polarized plug (one blade wider than the other). This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of this plug.
- Protect the power cord from being pinched or abraded.
- This product should be serviced by qualified service personnel when: the power supply cord or the plug has been damaged; or objects have fallen, or liquid has been spilled onto the product; or the product has been exposed to rain; or the product does not appear to operate normally or exhibits a marked change in performance; or the product has been dropped, or the enclosure damaged.
- Only use a cart or stand with this product that is recommended by this product's manufacturer.
- The power supply cord of this product should be unplugged from the outlet when left unused for a long period of time, or during electrical storms.
- Do not drip nor splash liquids, nor place liquid filled containers on the unit.
- **CAUTION:** No user serviceable parts inside, refer servicing to qualified personnel only.
- Fender® amplifiers and loudspeaker systems are capable of producing very high sound pressure levels which may cause temporary or permanent hearing damage. Use care when setting and adjusting volume levels during use.

FCC COMPLIANCE NOTICE

This equipment has been tested and found to comply within the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide a reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not used in accordance with the instructions, may cause harmful interference to radio communications and there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna, increase the separation between the equipment and receiver, connect the equipment into an outlet on a circuit different from that of the receiver. Consult the dealer or an experienced radio/TV technician if help is needed.

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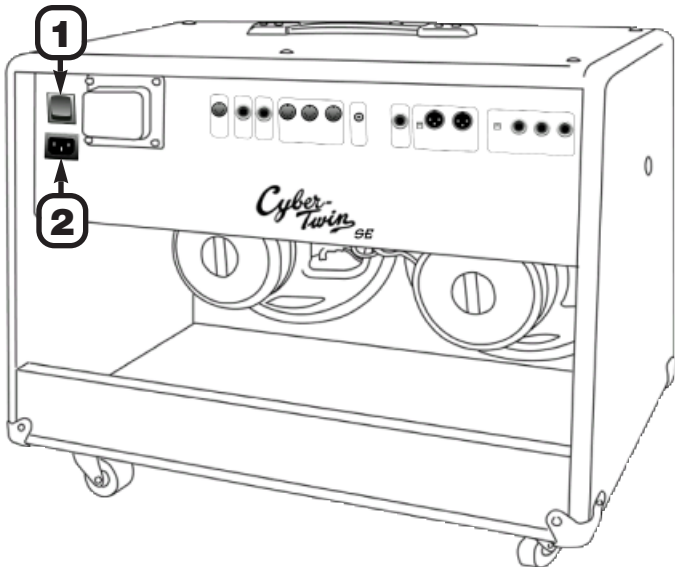
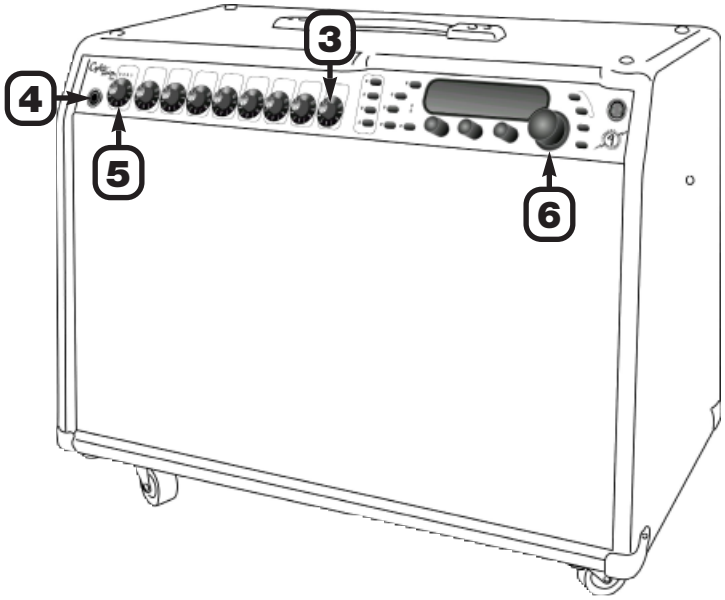
Quick Start





1) Make sure the **POWER** switch is off.

2) Connect the supplied power cord in compliance with the *Important Safety Instructions* on 3.

3) Turn **MASTER** level to minimum (1).

4) Plug your guitar into the **INPUT** jack, then switch **POWER** on.

5) While playing guitar, adjust the **TRIM** level so that the green LEDS are on most of the time and the red LED flashes occasionally at peak playing levels.

Set **MASTER** to desired level.

6) Rotate the **DATA WHEEL** to explore Amp Design presets. Amp settings and internal circuitry will change automatically! (You will hear the presets change instantly, before the motorized knobs "catch up.")

NOTE: You can interrupt the motorized rotation of a knob simply by grabbing it and turning it.

7) Turn to page 8 for an overview of the basic operation of your Cyber–Twin SE™.

Note on the Cyber–Twin SE™ presets

Custom Shop presets were created by various players fluent in the corresponding musical styles. The appropriate model of guitar was used wherever possible, ala Jimi with a maple-necked Stratocaster®.

Consequently, some presets may seem to be more "trebly" or "bassy" than you would prefer, or seem louder or quieter than some of the other presets. This is natural, because if person "A" plays a Telecaster® in a tiled room, and person "B" uses a Jazz guitar in a carpeted room, they will achieve very different end results. You can easily move the knob settings and store your changes if desired. Most of our Cyber-presets are designed to let the unique character of your instrument and playing style come through. That's why thousands of pros and hobbyists alike have added the Cyber-Twin® SE to their tone toolbox!

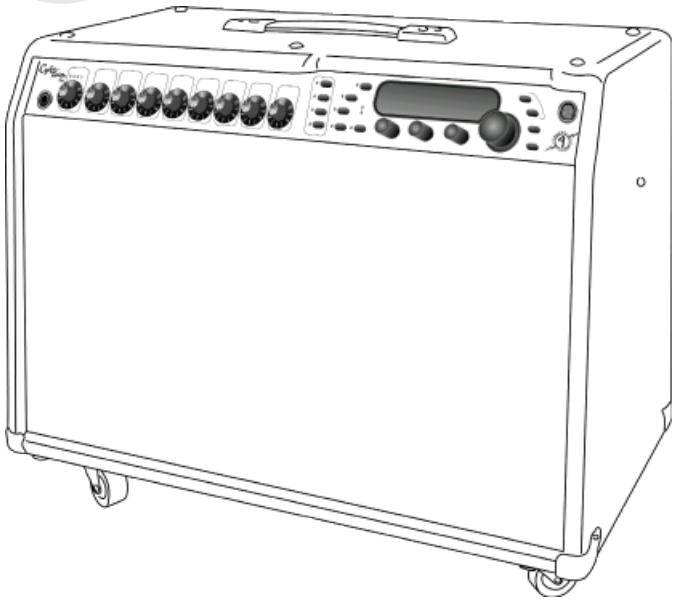
Enjoy!

Introduction

Your new Cyber-Twin® SE amplifier is the crowning achievement of Fender's most advanced research and development project. Brought to you by the same Tone–team that created the original Cyber–Twin™ amplifier, the Cyber-Twin® SE (Second Edition) is refined and updated with additional amp designs and effects. Cyber–Series amplifiers are endowed with Fender's exclusive **Virtual Tone Interpolation**™ technology (patent number 6,222,110). VTI™ technology enables the Cyber-Twin® SE amplifier to *be* different amplifiers according to circuit design. Starting with a virtual circuit board, the Cyber-Twin® SE amplifier "rewires" its fundamental architecture (tubes, resistors, capacitors, etc.) to become the essence of all the amplifier greats — Fender's Blackface™, Dyna–Touch™, Tweed and Modern amps, and even the best of the British amps!

The Cyber-Twin® SE amplifier allows you to be the amp designer. Start with one of 150 permanent amp and effect setups stored within the Cyber-Twin® SE amp—twist some knobs, make some changes, then SAVE to one of the 100 *rewritable* preset locations reserved onboard for your original amplifier designs. MIDI implementation on the Cyber-Twin® SE amplifier enables you to transfer presets to and from the amp for backup to a PC, or for exchange with other Cyber-Twin® SE amplifier players.

The Cyber-Twin® SE amplifier also puts a huge array of studio–quality effects at your command: Reverb, Modulation and Delay effects, enough to satisfy most any sonic appetite. And many are in *stereo*, so you can use the line outputs or headphones to enjoy a fully ambient stereo dimension. The Cyber-Twin® SE amplifier's Dyna–Touch™ power amp circuitry and Celestion® speakers deliver powerful, responsive Tone to you and your audience.



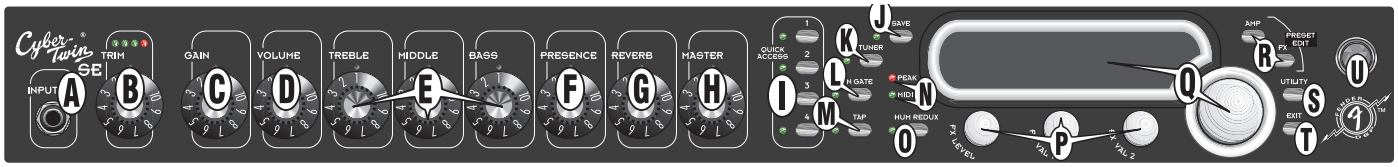
Thank you for choosing Fender®

—Tone, Tradition and Innovation—since 1946

Cyber-Twin® SE Amplifier Features

- 40 character display shows you menu options, prompts and amp design information
- The data wheel enables you to select a dynamic range of settings
- 5 modes of operation: •Play •Amp Edit •FX Edit •Utility •Tuner
- 8 motorized knobs automatically rotate to adjust to preset selections, MIDI continuous controller sequences and input from a MIDI pedal or analog expression pedal
- 250 amplifier design presets:
  - Fender Custom Shop – 100 custom amp designs including effects
  - Player's Lounge – 100 of your own (rewritable) amp and effects designs
  - Your Amp Collection – 50 classic amp designs as originally manufactured
- MIDI implementation:
  - 24 continuous controllers for automatic, sequenced control of amplifier settings
  - An assignable continuous controller for remote control of a dynamic parameter
  - 4 system exclusive functions for transferring presets and updating systems
- 16 drive circuitry selections: • 12 tube types, • 4 solid state types including new Extreme setting
- 2 vacuum tubes are used in the tube drive and the analog circuitry, (12AX7WC), now externally accessible
- 6 tone stacks, each with 2 location parameters (before/after the drive circuitry)
- 43 FX (effects) selections with 4–5 adjustable parameters each:
  - 10 delay FX • 11 modulation FX • 3 special FX • 4 FX combinations • 14 new FX
- 11 Reverb types with 4 adjustable parameters each
- 4 compression level settings
- A hum reduction button to reduce line noise
- 3 noise gate levels with an adjustable depth parameter
- 8 timbre types give instant tone shaping for style accent or balance
- 4 line/speaker phase settings allow you to reverse the polarity of each speaker independently
- 8 reverb/effects bypass combinations (or vibratone rotor speed) that you can toggle by footswitch
- 4 quick access keys for one button access to favorite amp design presets
- 4 button footswitch for hands free selection of your quick access presets
- The expression pedal jack allows you to control nearly every preset controllable parameter with an analog expression pedal (optional)
- 130 watts of stereo output power, (65 watts per channel)
- Two 12AX7 preamp tubes
- Two 12 inch, 8 ohm Celestion® G12T-100 speakers
- 1 stereo digital line output, RCA SPDIF jack for connection to digital sound equipment
- 2 stereo XLR impedance balanced output jacks, with mono/stereo selection switch
- 3 effects loop jacks (mono out, and mono or stereo in) with -10dbv/+4dbu switch
- 2 speaker extension jacks for experimenting with other external speaker cabinets

1 ✧ Overview



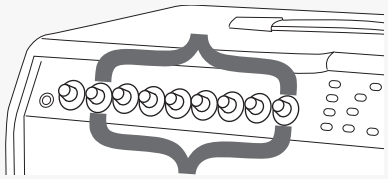
This page introduces key concepts for the basic operation of your Cyber–Twin SE™. The following pages provide an overview of each item on the front and rear panels.

The **Display** shows vital information and menus for the Cyber-Twin® SE. The **Data Wheel** works dynamically with the display giving you full control over preset selection, effect parameters and system configuration. The display also responds to the use of panel knobs or buttons providing useful information. You can enter different **Modes** to edit amplifier designs, effects and system utilities; each mode determines the functions of the display and data wheel.

Play Mode is active whenever the Cyber-Twin® SE amplifier is first switched on. After booting up, the display will show information about the current preset. The first line displays the preset location (bank/number) and name. The second line displays the type of *tone stack* controls (treble, middle, bass), tone stack location (pre/post distortion) and the active effect. In play mode, the data wheel selects presets.

♬ Each preset contains a complete set of amplifier and effects settings.

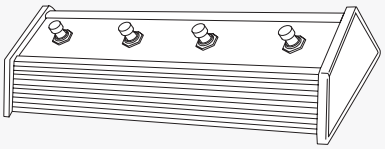
There are three banks of **Presets**. The **Fender Custom Shop** (C00-C99) and **Your Amp Collection** (A00-A49) are permanent presets. The **Player's Lounge** (P00-P99) presets are rewritable for you to save your own amp and effect designs.



The Cyber-Twin® SE is instantly reconfigured to the settings saved within a selected preset. The 8 **motorized** knobs on the Cyber-Twin® SE automatically adjust to the preset settings. You can safely interrupt knob rotation anytime by manually stopping it. Note that the display will temporarily indicate knob position when turned manually.

Changes you make to amplifier settings (volume, tone, effects, etc.) will be lost upon selecting a different preset or turning the amplifier off, unless you save them. **Save** simply by pressing SAVE, selecting a Player's Lounge preset to overwrite and pressing SAVE again. The **Save** LED blinks as a reminder to save settings once a change is made. **NOTE:** ***Memory Protection*** *must be disabled before you can save! (see page 24).*

Amp Edit Mode, FX Edit Mode and **Utility Mode** are activated by pressing the corresponding buttons to the right of the display. Use these modes for modifying amp design, selecting and editing effects and for system management. **Tuner Mode** is activated using the TUNER button; use it to tune your guitar. **Play Mode** is reactivated by pressing EXIT. Use it to play guitar!



Two **Footswitches** are supplied with your Cyber-Twin® SE. Connect them to the appropriate rear panel jacks to enable remote selection of your Quick Access buttons and Reverb/Effects bypass.

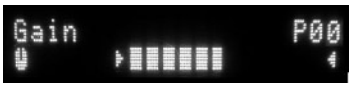
Front Panel Overview

A. INPUT JACK

Input connection for your guitar.

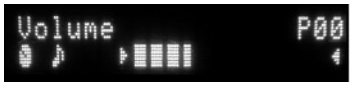
B. TRIM

Sets the input signal level for proper analog–to–digital conversion. Adjust TRIM so that most of the green LEDs stay on at normal playing levels and the red LED flashes occasionally while playing at peak intensity. This knob is not preset programmable nor motorized.



C. GAIN

Adjusts the distortion level and contributes to overall amplifier loudness. Use VOLUME {D} to compensate for any undesired volume level change resulting from a GAIN level change.

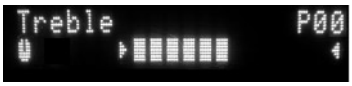


D. VOLUME

Adjusts the post–distortion signal level and contributes to overall amp loudness. Use in conjunction with GAIN {C} to normalize volume differences between presets.

♫ Several knobs affect the overall loudness of the amplifier:

Knob	Function	Preset Programmable	MIDI Controllable	Expression Pedal Controllable
TRIM	Supply proper signal level to DSP	NO	NO	NO
GAIN	Adjust distortion level	YES	YES	YES
VOLUME	Equalize level differences between presets	YES	YES	YES
MASTER	Global volume and maximum level governing	NO	YES	YES

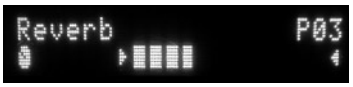


E. TREBLE / MIDDLE / BASS

Adjusts tone in the high–, mid–, and low–frequency ranges respectively.

F. PRESENCE

Adjusts tone in the ultra-high frequency range *after* the distortion circuitry for a crisp tone sparkle.

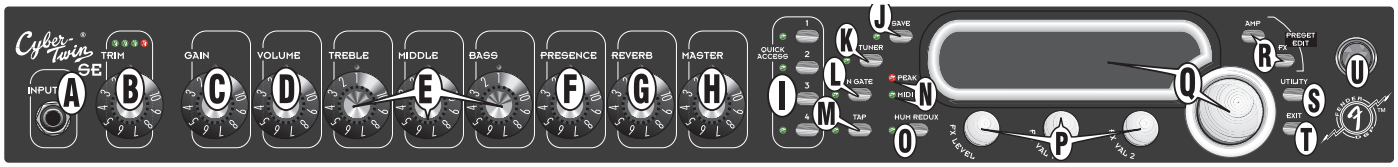


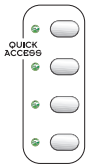
G. REVERB

Adjusts the level of the active Reverb. Enter AMP edit mode to select Reverb types and edit Reverb parameters (see page 14).

H. MASTER VOLUME

Controls the overall loudness of the amplifier *globally,* independent of any preset. MASTER VOLUME is not preset programmable, although it is motorized so that it can be controlled remotely by expression pedal or MIDI. Remote operation of MASTER VOLUME is limited to a maximum value defined by where the MASTER VOLUME is set manually on the front panel. Set the MASTER VOLUME knob to the desired maximum level and motorized control will be confined to the range below that boundary.





I. QUICK ACCESS

Provides instant access to four favorite presets. To assign a button, first select the preset with the data wheel. Then, *press and hold* a QUICK ACCESS button. The LED lights up when your new QUICK ACCESS button has been activated. Press the same button or corresponding footswitch button to recall the assigned preset.

J. SAVE

Saves the current amplifier configuration as a new preset.

1) Press SAVE once and a Player's Lounge preset location is displayed.
2) Select any Player's Lounge preset to overwrite using the data wheel. *Press EXIT to cancel the save operation*
3) Press SAVE again and your new preset will be stored.

The SAVE LED flashes after an amp setting is changed as a reminder to save. If a different preset is selected before the current configuration is saved, your changes will be lost.

♬ Use MIDI to transfer presets to and from a computer.
♬ Organize presets in the Player's Lounge by using SAVE to move (copy) presets.

K. TUNER

Turns the tuner on/off. The TUNER LED flashes and audio is muted while the tuner scale is displayed.

L. NOISE GATE

Turns the noise gate on/off. Use it to reduce static and environmental noise transmitted through nearby electronic devices. Enter AMP edit mode to edit noise gate depth and threshold parameters (see page 14).

M. TAP

In PLAY mode, TAP sets the time/rate interval of the active effect, if applicable. Press TAP at least twice at the desired rate to set the interval by feel (the average of the last five taps is calculated for multiple taps). Press TAP once for the longest interval possible. The TAP LED flashes at the interval rate which is also temporarily displayed. Adjust the time/rate parameter accessed in the FX edit mode for precision control of the TAP interval (see the FX menus on page 16 for details).

In UTILITY mode, TAP is used to confirm menu actions.

N. PEAK and MIDI LEDs

PEAK flashes when the DSP circuit is *clipping* (distorting). Reduce VOLUME if undesirable distortion is heard while this LED is on, then use MASTER to the increase loudness level.

MIDI is on when the Cyber–Twin SE™ is communicating MIDI information.

O. HUM REDUCTION

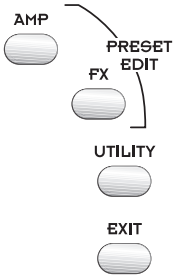
Turns hum reduction on/off. Reduces environmental hum in some situations using a patented algorithm that seeks out line frequencies and squelches only the hum, without degrading your music!

P. FX LEVEL / FX VAL 1 / FX VAL 2

Adjusts the level, parameter 1 and parameter 2 of the active effect, respectively. The functions of these knobs as well as additional parameters can be accessed through the FX edit mode (see page 16).

Q. DISPLAY and DATA WHEEL

Your interface for controlling the dynamic functions described throughout this manual (See the Overview on page 8).



R. PRESET EDIT

The AMP and FX buttons activate the AMP and FX (effects) edit modes respectively. For the AMP edit menus see page 14; FX edit menus see page 16.

S. UTILITY

Activates the UTILITY mode. For the UTILITY edit menus, see page 24.

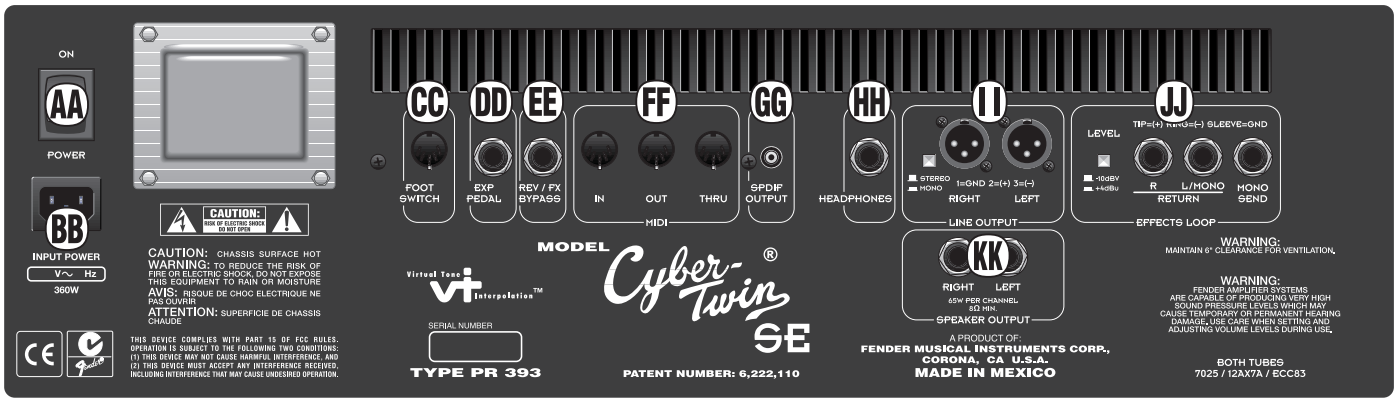
T. EXIT

Activates the default PLAY mode (except during factory preset restore and MIDI data transfers).

U. BLUE JEWEL

It's still a Fender

Rear Panel Overview

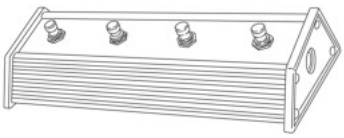


AA. POWER

Switches Power on or off to the Cyber-Twin® SE amplifier.

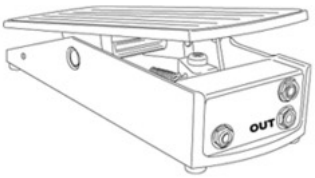
BB. IEC POWER CORD SOCKET

Connection for the included power cord. Connect to a grounded AC outlet in accordance with the voltage and frequency ratings listed on the rear panel of your Cyber–Twin SE™.



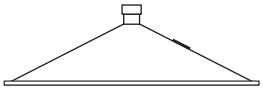
CC. FOOTSWITCH JACK

Connect the included Fender® 4–button footswitch using the MIDI type cable provided. Use this footswitch to remotely activate the Quick Access presets. Although the footswitch uses a MIDI type cable, the footswitch is an analog device and should only be connected to the FOOT SWITCH jack.



DD. EXPRESSION PEDAL JACK

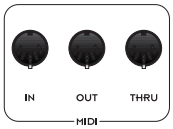
Connection for a standard expression foot pedal (optional) used to remotely control any of the following parameters: GAIN, VOLUME, TREBLE, MIDDLE, BASS, PRESENCE, REVERB, MASTER, any Reverb parameter, or any effect parameter. Expression pedal assignment is preset programmable through the AMP edit mode (see page 15).



EE. REVERB / FX BYPASS

Connection for the included one-button footswitch. Use this footswitch to remotely bypass Reverb and/or effects in one of 8 input/output configurations. Or, if Vibratone is the active effect, you can switch between rotor speeds (set Reverb/FX bypass parameter to Vibro Fast/Slow).

Reverb/FX bypass is preset programmable through the AMP edit menu (see REVERB / FX BYPASS on page 15)



FF. MIDI IN / OUT / THRU

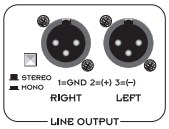
Musical Instrument Digital Interface ports for connecting MIDI devices to the Cyber–Twin SE™. MIDI can be used to remotely control the amplifier and transfer presets (see Utility Mode starting on page 24 and the appendices starting on page 26).

GG. SPDIF OUTPUT

"Sony/Phillips Digital Interface Format" output jack for connecting SPDIF compatible equipment such as a digital recorder. Although this jack accepts a standard RCA plug, the SPDIF OUTPUT is a digital stereo source not compatible with other functions normally associated with RCA jacks.

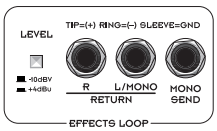
HH. HEADPHONES JACK

Connection for headphones using a standard 1/4″ stereo phone plug. Speaker outputs (internal and rear panel jacks) are automatically muted, but LINE OUTPUT jacks are not.



II. LINE OUTPUT

Impedance balanced XLR jacks for output to sound reinforcement and recording equipment. Use the button to select stereo or dual mono signal. These outputs are frequency compensated to simulate the sound of a miked speaker.



JJ. EFFECTS LOOP

Connections for external effects devices. Connect MONO SEND to the input of your effects device and the output of the effects device to the MONO RETURN jack or both RETURN jacks, according to your effects device. Use the LEVEL button to optimize the loop for your effects device (usually –10dBv for footpedals and +4dBu for rack mounted effects).

KK. SPEAKER OUTPUT

Stereo output jacks for connecting external speaker cabinets. Speakers must be 8–ohm minimum (per channel) and handle 65 watts minimum. Use unshielded speaker cable of 16–gauge or heavier for connections up to 50 ft (15 m) and always turn the amplifier off before making connections.

2 ✧ Amp Edit Mode

This chapter explains how to navigate the Amp Edit menus and defines each of the 17 Amp Edit parameters and their value ranges. Note that Reverb is considered part of the amplifier and is included in the Amp Edit menu to provide more options for using Reverb and effects simultaneously.

Amp Edit – Menu Navigation

Press AMP to activate Amp Edit mode and display a parameter. Press AMP repeatedly to display each parameter in a continuous loop, or press and hold AMP while turning the data wheel to move through the list in either direction.

Use the data wheel to edit parameter values. Press EXIT to return to Play mode.

Amp Edit – Menus

NAME CHANGE

Change the name of a preset. Use the FX VAL2 knob to move the blinking cursor and the data wheel to select characters.

Values: Alphanumeric characters

TONE STACK TYPE

Selects *tone stack* (TREBLE, MIDDLE and BASS) type: British—vintage UK style; Tweed—Fender Tweed amps; Blackface—Fender Blackface amps; Modern—broad spectrum tone stack with capabilities new to guitar amps; NeoBritish—modern UK style; Dyna–Touch—dirty channel of Fender Dyna-Touch series amplifiers

Values: Tweed ⇨ Blackface ⇨ British ⇨ Modern ⇨ NeoBritish ⇨ Dyna–Touch

TONE STACK LOCATION

Tone stack location, before or after distortion in the signal path.

Values: Pre–Distortion ⇨ Post–Distortion

DRIVE CIRCUITRY

Selects drive circuitry type. Blackface Tube and Tweed Tube offer cleaner sounds, while others produce high gain sounds. Each drive type has 3 increasing gain levels. Blackface—Fender Blackface amps; Tweed—Fender Tweed amps; Hot Rod—Fender Hot Rod amps; HMB—typical UK style; Dyna–Touch—Fender Dyna–Touch amps; Extreme—extreme high gain

Values: Blackface Tube (1/2/3) ⇨ Tweed Tube (1/2/3) ⇨ Hot Rod Tube (1/2/3) ⇨ HMB Tube (1/2/3) ⇨ Dyna–Touch (1/2/3) ⇨ Extreme

REVERB TYPE

Selects Reverb type. Small Ambience—, Small/Large Room—, Large Hall—, and Arena—simulate the acoustics of different sized spaces. Small/Large Plate—studio Reverb that generates bright timbres yet retains warmth. Blackface Reverb—classic Fender spring Reverb. Gated—Unique modern Reverb, see Reverb Tone/Shape menu below. Fender Reverb—classic 1963 tube driven unit uniquely located pre-distortion, see Reverb In Level/Dwell menu below.

Values: Small Room ⇨ Large Room ⇨ Small Hall ⇨ Large Hall ⇨ Arena ⇨ Small Plate ⇨ Large Plate ⇨ Blackface Reverb ⇨ Gated ⇨ Small Ambience ⇨ Fender Reverb

REVERB IN LEVEL / DWELL

Adjusts the Reverb circuit *input* level rather than the output level (which is controlled by the front panel REVERB knob). If *Fender Reverb* is the active Reverb type, this parameter is called Reverb Dwell.

Values: 1.0 (minimum) ⇨ 10.0 (maximum)

Adjusts the Reverb high–frequency tone. Or, if *Gated Reverb* is active, this parameter adjusts Reverb Shape with which radical decay characteristics can be achieved such as rectangular, linear and reverse tails.

REVERB TONE / SHAPE

Values: 1.0 (minimum) ⇨ 10.0 (maximum)

Adjusts the Reverb sustain time.

REVERB TIME

Values: 1.0 (shortest) ⇨ 10.0 (longest)

Adjusts the Reverb decay from a sparse/irregular sound to a dense/smooth sound.

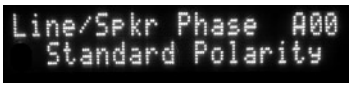
REVERB DIFFUSION

Values: 1.0 (sparse) ⇨ 10.0 (dense)

Shifts the equalization of the amplifier providing instant tone shaping to accommodate playing styles or to compensate for different room acoustics.

TIMBRE

Values: None ⇨ Full Body ⇨ Razor Edge ⇨ Bright & Light ⇨ Bass Booster ⇨ Drop Scoop ⇨ Super Bright ⇨ Squawk ⇨ Acoustic Scoop ↰



Selects the phase polarity (push/pull or pull/push) for each speaker. Fender amps with Reverb have traditionally had speakers operating in reverse polarity due to the extra tube gain stage necessary for Reverb. Useful when experimenting with stereo mike placement in the studio.

SPEAKER PHASE

Values: Both Standard ⇨ Both Reverse ⇨ Left Reverse ⇨ Right Reverse ↰

Use to *compress (*moderate) the range of volume output due to extremes between soft and loud guitar playing intensities. Compression also provides sustain and is a fundamental component of many amplifiers.

COMPRESSION

Values: Off ⇨ Low ⇨ Medium ⇨ High ⇨ Even Higher ↰⇨

Use to set the frequency cut–off boundary for the noisegate when it is activated.

NOISEGATE DEPTH

Values: 1.0 ⇨ 10.0

Use to set the signal level sensitivity for activating the noisegate. Affected by TRIM setting.

NOISEGATE THRESHOLD

Values: Low ⇨ Medium ⇨ High ↰

Assigns a parameter to be controlled by an expression pedal (optional). Parameters in [brackets] appear only when a particular effect or Reverb is active. For a list of effects parameters, see page 16, for Reverb parameters, see above.

EXPRESSION PEDAL ASSIGNMENT

Values: Volume ⇨ Gain ⇨ Treble ⇨ Middle ⇨ Bass ⇨ Presence ⇨ Reverb ⇨ [FX Level] ⇨ [FX Val 1] ⇨ [FX Val 2] ⇨ [FX Val 3] ⇨ [FX Val 4] ⇨ Master Volume ⇨ Reverb In Level [Dwell] ⇨ Reverb Tone [Shape] ⇨ Reverb Time ⇨ Reverb Diffusion ↰

Assigns a parameter to be controlled by a MIDI continuous controller pedal (optional). Parameters in [brackets] appear only when a particular effect or Reverb is active. For effects types/parameters, see page16, for Reverb types/parameters, see above.

CONT. CONTROLLER ASSIGNMENT

Values: Volume ⇨ Gain ⇨ Treble ⇨ Middle ⇨ Bass ⇨ Presence ⇨ Reverb ⇨ [FX Level] ⇨ [FX Val 1] ⇨ [FX Val 2] ⇨ [FX Val 3] ⇨ [FX Val 4] ⇨ Master Volume ⇨ Reverb In Level [Dwell] ⇨ Reverb Tone [Shape] ⇨ Reverb Time ⇨ Reverb Diffusion ↰

Use to bypass the in or out signals for Reverb “tail” and/or effects. Or, when Vibratone is the active effect, the Rotor Speed Fast/Slow parameter is available for switching between two (adjustable) rotor speeds (see Vibratone, page 20).

REVERB / FX BYPASS

Values: FX In ⇨ Reverb In ⇨ FX Out ⇨ Reverb Out ⇨ FX & Reverb In ⇨ FX In & Reverb Out ⇨ FX Out & Reverb In ⇨ FX & Reverb Out ⇨ [Rotor Speed Fast/Slow] ↰

3 ✧ FX Edit Mode

This chapter explains how to navigate the FX Edit menus and defines each of the 43 effects, their parameters and value ranges. Note that 3 parameters of the active effect can be adjusted with the FX LEVEL, FX VAL 1 and FX VAL 2 knobs, but the remaining 2 or 3 parameters can only be accessed through the FX edit menus. A glossary of effect and parameter definitions follows the menu table, (see page 19).

FX Edit – Menu Navigation

Press FX to activate FX Edit mode and display the active effect. Use the data wheel to select a different effect or press FX repeatedly to display each parameter of the active effect in a continuous loop (press and hold FX while turning the data wheel to move through the list in either direction).

FX Select ⇨ Level ⇨ Val 1 ⇨ Val 2 ⇨ Val 3 ⇨ Val 4 ⇨ (Val 5) ↰

Use the data wheel to adjust values of the active effect parameter (or select effects in the FX Select menu). Press EXIT to return to Play mode.

FX Edit – Menus

Mono Delay	Delay Out Level	Delay Time	Delay Feedback	Delay Brightness	Delay In Level	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Dotted 8/16 Delay	Delay Out Level	Delay Time	Delay Feedback	Delay Brightness	Delay Stereo	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
One-E-Da-Delay	Delay Out Level	Delay Time	Delay Feedback	Delay Brightness	Delay Stereo	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Ping-Pong Delay	Delay Out Level	Delay Time	Delay Feedback	Delay Brightness	Delay Stereo	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Swing Tap Delay	Delay Out Level	Delay Time	Delay Feedback	Delay Brightness	Delay Stereo	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Tape Echo	Echo Out Level	Echo Time	Echo Feedback	Echo Wow&Flutter	Echo Brightness	Echo Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Stereo Tape Echo	Echo Out Level	Echo Time	Echo Feedback	Echo Wow&Flutter	Echo Brightness	Echo Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Stereo Flam Delay	Delay Out Level	Delay Time	Delay Feedback	Delay Brightness	Delay Stereo	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Ducking Delay	Delay Out Level	Delay Time	Delay Feedback	Delay Release	Delay Ducking Threshold	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Backwards Delay	Delay Out Level	Delay Time	Delay Forward Feedback	Delay Reverse Feedback	Delay Brightness	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step

Tremolo	Tremolo Out Level	Tremolo Rate	Tremolo Depth	Tremolo Offset	Tremolo Shape	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Amp Tremolo	Tremolo Out Level	Tremolo Rate	Tremolo Depth	Tremolo Duty Cycle	Tremolo Shape	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Auto Pan	Pan Out Level	Pan Rate	Pan Depth	Pan Shape	Pan Phase	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Phaser	Phaser Out Level	Phaser Rate	Phaser Depth	Phaser Feedback	Phaser Stereo	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Vibratone	Vibratone Out Level	Rotor Speed	Vibratone Doppler	Rotor Frequency Speed 1	Rotor Frequency Speed 2	
	1.0-10.00	0.08-10.0Hz	1.0-10.0	0.08-10.0Hz	0.08-10.0Hz	
Pedal Wah	Wah Out Level	Wah	Wah Heel Frequency	Wah Toe Frequency	Wah Sweep Type	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	The Babys Cryin' or The Real McCoy	
Touch Wah	Wah Out Level	Wah Sensitivity	Wah Minimum Frequency	Wah Maximum Frequency	Wah Peak	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	LowQ or HighQ	
Sine Chorus	Chorus Out Level	Chorus Rate	Chorus Depth	Chorus Average Delay	Sine Chorus Phase	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Triangle Chorus	Chorus Out Level	Chorus Rate	Chorus Depth	Chorus Average Delay	Tri-Chorus Phase	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Sine Flange	Flange Out Level	Flange Rate	Flange Depth	Flange Feedback	Sine Flange Phase	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Triangle Flange	Flange Out Level	Flange Rate	Flange Depth	Flange Feedback	Tri-Flange Phase	
	1.0-10.0	0.08-10.0Hz	1.0-10.0	1.0-10.0	1.0-10.0	
Delay + Chorus	FX Wet Out Level	Delay Time	Chorus Depth	Delay Feedback	Chorus Rate	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	0.08-10.0Hz	Ramp or Step
Delay + Flange	FX Wet Out Level	Delay Time	Flange Depth	Delay Feedback	Flange Rate	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Delay + Phaser	FX Wet Out Level	Delay Time	Phaser Depth	Delay Feedback	Phaser Rate	Delay Time Change
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
AutoSwell + Chorus	FX Wet Out Level	AutoSwell Attack Time	Chorus Depth	AutoSwell Sensitivity	Chorus Rate	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	0.8-10.0 Hz	
Ultra-Clean + Chorus	FX Wet Out Level	Chorus Rate	Chorus Depth	Body	Brilliance	
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	
Pitch Shift	Pitch Shift Out Level	Pitch	Pitch Detune	Pitch Feedback	Pitch Pre-Delay	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	

Ring Modulation + Delay	FX Wet Out Level	Modulator Frequency	Delay Out Level	Delay Time	Delay Feedback	Delay Time Change
	1.0-10.0	0.08-10.0Hz	1.0-10.0	30-1450 ms	1.0-10.0	Ramp or Step
Auto Pan Delay *New!*	Delay Out Level	Delay Time	Delay Feedback	Delay Brightness	Delay In Level	
	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	
Fuzz *New!*	Fuzz Out Level	Fuzz Gain	Octave Level	Low Frequency	High Frequency	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	
Resolver *New!*	Resolver Out Level	Resolver Depth	Resolver Tone	Resolver Attack	Resolver Release	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	
Pedal Pitcher *New!*	Pitch Shift Out Level	Pitch	Pitch Pre-Delay	Pitch Heel Limit	Pitch Toe Limit	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	
Overdrive *New!*	Overdrive Out Level	Overdrive Gain	Overdrive Bass	Overdrive Middle	Overdrive Treble	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	
Alienator *New!*	Alienator Out Level	Alienator Content	Heel Range Limit	Toe Range Limit	Alienator Shape	
	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	
Pedal Wah + Delay	Delay Out Level	Delay Time	Delay Feedback	Wah	Delay Brightness	Delay Time Change
New!	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	1.0-10.0	Ramp or Step
Touch Wah + Delay	Delay Out Level	Delay Time	Wah Sensitivity	Wah Peak	Delay Feedback	Delay Time Change
New!	1.0-10.0	30-1450 ms	1.0-10.0	LowQ or HighQ	1.0-10.0	Ramp or Step
Fuzz + Pedal Wah	Fuzz Out Level	Fuzz Gain	Wah	Heel Frequency	Toe Frequency	
New!	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	
Fuzz + Touch Wah	Fuzz Out Level	Fuzz Gain	Wah Sensitivity	Octave Level	Wah Peak	
New!	1.0-10.0	1.0-10.0	1.0-10.0	1.0-10.0	LowQ or HighQ	
Fuzz + Delay	Fuzz Out Level	Fuzz Gain	Delay Out Level	Delay Time	Delay Feedback	Delay Time Change
New!	1.0-10.0	1.0-10.0	1.0-10.0	30-1450 ms	1.0-10.0	Ramp or Step
Octave + Tape Echo	Lower Octave Out Level	Echo Out Level	Echo Time	Echo Feedback	Echo Wow & Flutter	Echo Time Change
New!	1.0-10.0	1.0-10.0	30-1450 ms	1.0-10.0	1.0-10.0	Ramp or Step
MidBoost + Tape Echo	MidBoost Out Level	MidBoost Frequency	Echo Out Level	Echo Time	Echo Feedback	Echo Time Change
New!	1.0-10.0	1.0-10.0	1.0-10.0	30-1450 ms	1.0-10.0	Ramp or Step
Overdrive + Tape Echo	Overdrive Level	Overdrive Gain	Echo Out Level	Echo Time	Echo Feedback	Echo Time Change
New!	1.0-10.0	1.0-10.0	1.0-10.0	30-1450 ms	1.0-10.0	Ramp or Step
None	None					

Effects and Parameters Defined

NOTE: Most effects have the same types of parameters in common and they are defined as a group below. Some effects have unique parameters and they are defined under the corresponding effect.

Common Parameters

IN / OUT LEVEL—Adjusts the effect circuit input or output signal level.

TIME / RATE—Adjusts an interval or cycle duration.

FEEDBACK—Adjusts how much of the effect circuit output is returned to its input.

BRIGHTNESS—Adjusts the effected tone in the high-frequency range.

DELAY TIME CHANGE—Select Ramp for an analog sounding warble, or select Step for a digital sounding zip when changing the delay time parameter.

STEREO—Adjusts the stereo separation between channels.

DEPTH—Adjusts the range of a modulation sweep.

PHASE—Adjusts the relationship between the two oscillators used in modulation effects.

Effects Definitions

Mono Delay

The most basic single-tap digital delay effect.

Dotted 8/16, One-E-Da, Ping Pong, Swing Tap and Stereo Flam Delays

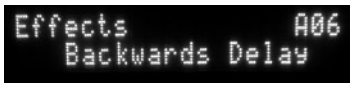
Multi–tap (multiple–output) stereo digital delays with various tap timings.

Ducking Delay

A mono delay with a special feature – while you are playing, your delayed repeats are quiet or “duck” below the dry signal – when you stop playing, the delayed repeats return to normal volume.

DUCKING DELAY RELEASE— Adjusts how long the delayed repeats wait to return to normal volume after you stop playing.

DUCKING SENSITIVITY—Adjusts how loud your playing has to be to activate the delay ducking.



Backwards Delay

A unique effect that repeats the delay intervals in reverse.

DELAY FORWARD FEEDBACK—Adjusts the number of delay repeats, all the same as the first delay (reversed).

DELAY REVERSE FEEDBACK—Adjusts the number of delay repeats which alternately reverse direction (forward and backward).

Tape Echo and Stereo Tape Echo

Two-tap, ping-pong delay effects that simulate mono and stereo tape echo machines complete with wow & flutter.

WOW & FLUTTER—Adds random frequency response modulation and pitch variation to simulate the unique characteristics of tape echo machines.

Sine Chorus and Triangle Chorus

Stereo effects that add a “swirling” effect (sine) or “transparent” effect (triangle) with delay modulation used to “thicken” a sound.

Sine Flange and Triangle Flange

Stereo effects with feedback that add a “whooshing” effect (sine) or a sharper “phasing” effect (triangle) with delay modulation.

Amp Tremolo and Tremolo

Modulates volume of the input signal. Amp Tremolo is vintage Fender Blackface amplifier tremolo and Tremolo is a sine-wave effect approximating a grid–bias tremolo or the repeat percussion of a Tweed Tremolux.

DUTY CYCLE—Adjusts the high to low interval ratio of the signal volume. (Amp Tremolo only)

TREMOLO SHAPE—Adjusts tremolo character from smooth to choppy.

TREMOLO OFFSET—Adjusts the oscillator center frequency from extreme to gentle signal modulation. (Tremolo only)

Auto Pan

A sine-wave left-right panning effect. A low frequency oscillator sweeps the signal back and forth in the stereo field.

PAN SHAPE—Adjusts the Auto Pan waveform from smooth to choppy.

Pedal Wah

A traditional foot-operated wah controlled with an expression pedal (optional). For best results, the optimal expression pedal specifications include passive, 10k to 250k ohms.

WAH—Adjusts the wah filter center frequency.

HEEL / TOE FREQUENCY—Adjusts the minimum and maximum frequency limits. Use to control the functional range of your pedal.

SWEEP TYPE—Select The Baby’s Cryin’ (modern wah) or The Real McQ (vintage wah).

Touch Wah

Touch Wah is a dynamic wah that varies according to playing strength and volume level.

SENSITIVITY—Adjusts the Touch Wah sensitivity to changes in volume.

MINIMUM / MAXIMUM FREQUENCY—Adjusts the Touch Wah frequency at low and high playing volumes respectively. These settings can be reversed so that low volumes will start with a high frequency wah that decreases when volume increases.

SWEEP TYPE—Select Low Q (smooth wah) or High Q (extreme wah).

Vibratone

Rotating speaker effect based on the CBS-era Fender Vibratone speaker with a 2–speed rotating baffle.

VIBRO DOPPLER—Adjusts the *Doppler shift* (pitch change) of baffle rotation.

ROTOR SPEED 1, 2—Sets alternate rotor speeds selectable with the Reverb/FX Bypass footswitch: Select Vibratone as the active effect, then use the AMP button to access the Reverb/FX Bypass menu. Select Vibro Fast/Slow.

Phaser

A 12 stage, stereo phaser effect.

Delay + Chorus

Combination mono digital delay and triangle chorus effect.

Delay + Flange

Combination mono digital delay and triangle flange effect.

Delay + Phaser

Combination mono digital delay and stereo phaser effect.

AutoSwell + Chorus

An automatically triggered volume *swell* (increase) effect with chorus. The swell begins when you reach the selected volume threshold. Note that you must stop playing momentarily for autoswell to reset.

AUTOSWELL ATTACK TIME—Adjusts the time the swell takes to reach full volume.

AUTOSWELL SENSITIVITY—Adjusts the volume level at which the effect is triggered.

UltraClean + Chorus

An ultra-clean guitar tone with triangle chorus. For best results, use with clean amp settings and your guitar's neck (rhythm) pickup.

BODY—Adjusts low frequency tone.

BRILLIANCE—Adjusts high frequency tone.

Pitch Shift

A semitone-variable pitch shifter and detuner.

PITCH—Adjusts the pitch shift value in semi-tone increments from: 1.0 (2 octaves below), to 5.5 (unison) to 10.0 (2 octaves above).

PITCH DETUNE—Adjusts the pitch shift offset in micro-tone increments from: 1.0 (semi-tone flat), to 5.5 (in tune), to 10.0 (semi-tone sharp).

PITCH PRE-DELAY—Adjusts the delay before the pitch-shifted signal is heard.

Ring Modulation + Delay

A ring modulator with mono delay. Ring modulator creates tones above and below your original guitar signal.

MOD FREQUENCY—Adjusts the ring modulator frequency. Radical results can be achieved by controlling this parameter with an expression pedal (optional). Select Ring modulator as the active effect, then use the AMP button to access the Expression Pedal Assignment menu. Select Mod Frequency.

New Effects

Auto Pan Delay

A digital delay with random auto-panning in the stereo field.

Fuzz

A classic 60's–70's distortion effect rich with overtones and sustain. The effect includes an octave higher parameter which can be independently mixed in.

FUZZ GAIN—Adjusts the gain of the fuzz effect.

OCTAVE LEVEL—Adjusts the level of the octave up signal mixed in.

LOW FREQUENCY—Adjusts the low frequency tone of the fuzz effect.

HIGH FREQUENCY—Adjusts the high frequency tone of the fuzz effect.

Resolver

A low-fidelity effect that purposely reduces the quality of the input signal. Effective for "lo–fi" filtering on song introductions, for example.

DEPTH—Adjusts the amount of signal degradation.

TONE—Adjusts the tone of the degraded signal.

ATTACK—Adjusts the amount of time it takes for the signal to reach full degradation.

RELEASE—Adjusts the amount of time it takes for the signal to return from full degradation.

Pedal Pitcher

An effect very similar to the Pitch Shift effect, optimized for dynamic control with an expression pedal or continuous controller. With practice, "wammy bar" effects can be created. This effect is positioned before distortion whereas the Pitch Shift effect is post distortion.

PITCH—Smoothly adjusts the pitch shift value in semi-tone increments from: 1.0 (2 octaves below), to 5.5 (unison) to 10.0 (2 octaves above).

PITCH PRE-DELAY—Adjusts the delay before the pitch-shifted signal is heard.

HEEL LIMIT—Adjusts the minimum limit of pitch reached at the heel of the pedal.

TOE LIMIT—Adjusts the maximum limit of pitch reached at the toe of the pedal.

Overdrive

A popular pre-distortion gain stage effect (like the green pedal you know and love), with additional tone controls. Use this effect with the Reverb/FX Bypass footswitch (assigned to "FX Input Only" in the Amp Edit Mode) to recreate a "stompbox" setup.

GAIN—Adjusts the gain of the overdrive effect.

BASS—Adjusts the low frequency band of the overdriven signal.

MIDDLE—Adjusts the middle frequency band of the overdriven signal.

TREBLE—Adjusts the high frequency band of the overdriven signal.

Alienator

A strange effect similar to a random ring modulator that provides additional tones reminiscent of sci-fi B-movies. This effect is optimized for expression pedals or continuous controllers.

CONTENT—Adjusts the frequency range of the additionally generated tones.

HEEL RANGE LIMIT—Adjusts the minimum frequency limit of the content parameter for pedal control.

TOE RANGE LIMIT—Adjusts the maximum frequency limit of the content parameter for pedal control.

SHAPE—Adjusts the shape or taper of the content curve between the heel and toe limits.

Pedal Wah + Delay and Touch Wah + Delay

New combination effects including pre-distortion pedal wah or touch wah combined with a Mono Delay effect placed post-distortion.

Fuzz + Pedal Wah and Fuzz + Touch Wah

New combination effects including two pre-distortion effects, pedal wah or touch wah combined with fuzz.

Fuzz + Delay

A new combination effect including pre-distortion fuzz combined with a Mono Delay effect placed post-distortion.

Octave + Tape Echo

A combination effect with a pre-distortion octaver allowing a simultaneous mix of an octave lower and dry signal combined with post-distortion tape echo.

Midboost + Tape Echo

A pre-distortion midboost effect voiced according to the active midboost circuit used in the Eric Clapton Signature Stratocaster® guitar combined with a post-distortion tape echo.

MIDBOOST FREQUENCY—Adjusts the center frequency in the middle frequency band of the midboost.

Overdrive + Tape Echo

A combination effect including pre-distortion “stompbox” overdrive and post-distortion tape echo.

4 ✧ Utility Mode

This chapter explains how to navigate the Utility menus and describes each of the 12 Utility parameters and their functions or value ranges. Utility mode is used for MIDI functions and system management and all utility mode parameters are global in scope (not affected by presets).

Utility – Menu Navigation

Press UTILITY to activate Utility mode and display a parameter or function. Press UTILITY repeatedly to display each parameter in a continuous loop, or press and hold UTILITY while turning the data wheel to move through the list in either direction.

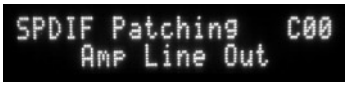
Use the data wheel to edit parameter values. Press EXIT to return to Play mode.

Press TAP to activate special functions such as restoring factory presets and dumping presets or utility settings to a PC or another Cyber-Twin® SE.

Utility – Menus

Disable/enable the SAVE button. When on prevents accidental overwriting of stored presets. Upon first power up, this feature is defaulted to on.

MEMORY PROTECTION **Values:** On ⇨ Off



Include or bypass pre-amplifier, onboard effects and tone processing in the S/PDIF output signal for direct digital recording.

S/PDIF PATCHING **Values:** Amp Line Out ⇨ Guitar Direct Out (bypass)

Select a MIDI continuous controller number to match your device. Many CC pedals use 11 (default).

CONT. CONTROLLER NUMBER **Values:** 1–100

Sets the amplifier to receive MIDI information on all channels (default), one channel, or no channels.

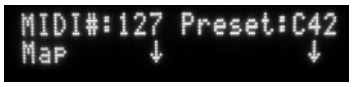
MIDI RECEIVE CHANNEL **Values:** Omni (all) ⇨ 1–16 ⇨ Off

Sets the amplifier to transmit MIDI information on one channel, or no channels (default).

MIDI TRANSMIT CHANNEL **Values:** 1–16 ⇨ Off

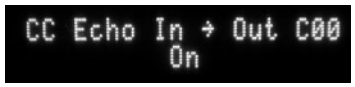
Set the amplifier to respond to system exclusive commands for any ID, or one ID. Using ID numbers allows you to transfer MIDI data to exclusive subsets of Cyber–Twin SE™ amplifiers on a network regardless of MIDI channel settings.

MIDI SYSTEM EXCLUSIVE ID NUMBER **Values:** Omni (all) ⇨ 17–32



Assign MIDI program changes in bank #00 to activate any preset in any order as specified by this map. Use the FX LEVEL to select MIDI number (program change) and the FX VAL2 knob to assign any preset to that MIDI number.

MIDI PRESET MAPPING **Values:** FX LEVEL: 1–127; FX VAL2: P00-P99 ⇨ C00-C99 ⇨ A00-A49



Outgoing MIDI data can be set to include (echo) or exclude (default) incoming continuous controller data. This feature is useful when recording continuous controller sequences.

MIDI CONT. CONTROLLER ECHO **Values:** On ⇨ Off

Restores all rewritable presets (Player's Lounge) to factory originals. **WARNING:** This will erase all your custom presets EVEN IF MEMORY PROTECTION IS ON! Press TAP once to initiate and press TAP a second time to verify the preset restore operation Press EXIT *before* the second TAP to cancel the restore.

FACTORY PRESET RESTORE **Values:** none

Transfers all Utility settings (every Utility menu parameter) to another Cyber–Twin SE™ or MIDI device. Press TAP to initiate.

MIDI DUMP UTILITIES **Values:** none

Transfers any one preset (every parameter) to another Cyber–Twin SE™ or MIDI device. The current preset is automatically selected, but you can use the data wheel to select any preset (not audible) to transfer. Press TAP to initiate the dump. A receiving Cyber–Twin SE™ will prompt you to select a Player's Lounge preset to overwrite.

MIDI DUMP - ANY PRESET **Values:** P00-P99 ⇨ C00-C99 ⇨ A00-A49

Transfers all presets (every parameter) to another Cyber–Twin SE™ or MIDI device. Press TAP to initiate. A receiving Cyber–Twin SE™ will only load Player's Lounge (rewritable) presets.

MIDI DUMP - ALL PRESETS **Values:** none

NOTE: Original Cyber–Twin™ presets may be loaded successfully into a new Cyber–Twin SE™. However, Cyber–Twin SE™ presets are not compatible with the original Cyber–Twin™

5 ✧ Appendices

Appendix 1 MIDI Implementation Chart

FUNCTION		TRANSMITTED	RECOGNIZED	REMARKS
Basic	Default	X	1-16	Memorized
Channel	Changed	1-16	1-16	
	Default	X	Mode 2, Mode 4	
Mode	Messages	X	Mode 2, Mode 4	
	Altered	X	X	
Note	Note Number	X	X	
Number	True Voice	X	X	
Velocity	Note ON	X	X	
	Note OFF	X	X	
After	Keys	X	X	
Touch	Channel	X	X	
Pitch Bender		X	X	
Control Change		O	O	Assignable Continuous Controller numbers are 1–100
Program	Implemented	O	O	Internally mapped
Change	True #			
System Exclusive		O	O	See Appendix
System	Song Position	X	X	
Common	Song Select	X	X	
	Tune Request	X	X	
System	Clock	X	X	
Real Time	Commands	X	X	
	Local On/Off	X	X	
	All Notes Off	X	X	
Auxiliary	Active Sensing	X	X	
Messages	System Reset	X	X	
	GM ON	X	X	

Mode 1: Omni On, Poly Mode 2: Omni On, Mono O: Yes
Mode 3: Omni Off, Poly Mode 4: Omni Off, Mono X: No

Appendix 2

MIDI Program and Control Changes

The Cyber-Twin® SE will respond to and transmit program and control changes when the appropriate MIDI receive and transmit channels are selected. Use program and control changes to remotely select presets and adjust settings either in real time or from a recorded sequence.

Program Change Messages

- The Cyber–Twin SE™ uses the MIDI convention of numbering which starts with "0." For example program change 6 activates preset 06 (not 06).
- Bank change messages only need to be sent once each time you change bank numbers.

Select amplifier presets from the following banks:

Bank 00—MIDI Map (as defined in Utility Mode)
Bank 01—Fender Custom Shop presets
Bank 02—Player's Lounge presets
Bank 03—Your Amp Collection presets

Use the format: B**n** 00 00 32 **bb** C**n pp**
(**n**=MIDI channel, **bb**=bank number, **pp**=preset number)

Activate the tuner using program change 127 in banks 01–03.

Control Change

Adjust amplifier settings using the following continuous controller numbers and value ranges.

- The Cyber–Twin SE™ uses a continuous controller resolution of 0–127 (it will not accept 16,384 step sizes).
- Data increment/decrement models the data wheel by +/– 1 steps.

CC#	Parameter	Value Range
07	Master Volume	(0 - 127)
32	LSB for Bank Changes	(0 - 127)
85	Effects/Reverb Bypass	OFF=(0-63), ON=(64-127)
86	Hum Reduction	OFF=(0–63), ON=(64-127)
96	Data Increment2	(Linked to the Data Wheel)
97	Data Decrement2	(Linked to the Data Wheel)
102	Gain	(0 - 127)
103	Volume	(0 - 127)
104	Treble	(0 - 127)
105	Middle	(0 - 127)
106	Bass	(0 - 127)
107	Presence	(0 - 127)
108	Reverb	(0 - 127)
109	Master Volume	(0 - 127)
110	FX Level	(0 - 127)
111	FX Val 1	(0 - 127)
112	FX Val 2	(0 - 127)
113	FX Val 3	(0 - 127)
114	FX Val 4	(0 - 127)
115	Reverb In [Dwell]	(0 - 127)
116	Reverb Tone [Shape]	(0 - 127)
117	Reverb Time	(0 - 127)
118	Reverb Diffusion	(0 - 127)
119	Tap	

Appendix 3 SysEx ◊ MIDI Dump

This appendix contains tables describing the System Exclusive message components and protocol for MIDI Dump. The SysEx device ID must be set to Omni (or the same as the transmitting device ID) to accomplish the data transfers. **NOTE:** Data values are displayed in hexadecimal with "H" for clarification.

System Exclusive Header

VALUE	DESCRIPTION
F0H	Start of System Exclusive Message
08H	Fender Manufacturer ID
nnH	nn = Device ID (minus one)
12H	Amp ID number 12H. The upper nibble identifies the Cyber-Twin® SE amplifier and the lower nibble designates software version.
ffH	Function ID number (01H=Utilities message; 02H=One preset message; 03H=All presets message)
F7H	End of System Exclusive Message

System Exclusive Data Packet

VALUE	DESCRIPTION
F0H	Start of System Exclusive Message
08H	Fender Manufacturer ID
nnH	nn = Device ID (minus one)
12H	Amp ID number 12H. The upper nibble identifies the Cyber-Twin® SE amplifier and the lower nibble designates software version
ffH	Function ID number (01H=Utilities message; 02H=One preset message; 03H=All presets message)
PnH	Packet Number
Data	Data bytes: The data bytes have been formatted following the MIDI Specification
cbH	Checksum byte used for error checking
F7H	End of System Exclusive Message

System Exclusive End of File Message

VALUE	DESCRIPTION
F0H	Start of System Exclusive Message
08H	Fender Manufacturer ID
nnH	nn = Device ID (minus one)
12H	Amp ID number 12H. The upper nibble identifies the Cyber-Twin® SE amplifier and the lower nibble designates software version
ffH	Function ID number (01H=Utilities message; 02H=One preset message; 03H=All presets message)
7BH	End of System Exclusive File Byte
F7H	End of System Exclusive Message

MIDI Dump Initiation Message

VALUE	DESCRIPTION
F0H	Start of System Exclusive Message
08H	Fender Manufacturer ID
nnH	nn = Device ID (minus one)
21H	Amp ID number 21H. The upper nibble identifies the Cyber-Twin® SE amplifier and the lower nibble designates software version.
04H	Message ID number for additional parameter controls.
23H	ID number indicating request for a MIDI Dump
00H	Unused Data Byte
00H	Unused Data Byte
00H	Unused Data Byte
ddH	Dump ID byte: 01H = Transmit Utilities, 02H = Transmit One Preset, 03H = Transmit All Presets
7BH	End of System Exclusive File Byte
F7H	End of System Exclusive Message

Appendix 4 SysEx ◊ Edit Preset Parameters

This appendix contains tables describing the System Exclusive message components and protocol for editing preset parameters. The System Exclusive device ID must be set to Omni (or the same as the transmitting device ID) to accomplish the data transfers. **NOTE:** Data values are displayed in hexadecimal with "H" for clarification.

System Exclusive Preset Edit Message

VALUE	DESCRIPTION
F0H	Start of System Exclusive Message
08H	Fender Manufacturer ID
nnH	nn = Device ID (minus one)
12H	Amp ID number 12H. The upper nibble identifies the Cyber-Twin® SE amplifier and the lower nibble designates software version.
05H	Message ID number for additional parameter controls.
ddH	Parameter ID number for additional parameter controls (See table below).
vvH	Value for the parameter you wish to edit (See table below).
7BH	End of System Exclusive File Byte
F7H	End of System Exclusive Message

Parameter IDs and Values

PARAMETER	ID	VALUE
Tone Stack Type	00H	00H = Tweed
	00H	01H = Blackface
	00H	02H = British
	00H	03H = Modern
	00H	04H = Neo British
	00H	05H = Dyna-Touch
Tone Stack Position	01H	00H = Pre-Distortion
	01H	01H = Post-Distortion
Drive Circuitry	02H	00H = Blackface Tube1
	02H	01H = Blackface Tube2
	02H	02H = Blackface Tube3
	02H	03H = Tweed Tube1
	02H	04H = Tweed Tube2
	02H	05H = Tweed Tube3
	02H	06H = Hot Rod Tube1
	02H	07H = Hot Rod Tube2
	02H	08H = Hot Rod Tube3
	02H	09H = HMB Tube1
	02H	0AH = HMB Tube2
	02H	0BH = HMB Tube3
	02H	0CH = Dyna Touch 1
	02H	0DH = Dyna Touch 2
	02H	0EH = Dyna Touch 3
	02H	0FH = Extreme
Effects Type	03H	00H = None
	03H	01H = Mono Delay
	03H	02H = Dotted 8/16 Delay
	03H	03H = One-E-Da Delay
	03H	04H = Ping Pong Delay
	03H	05H = Swing Tap Delay
	03H	06H = Tape Echo

PARAMETER	ID	VALUE
Effects Type *(continued)*	03H	07H = Stereo Tape Echo
	03H	08H = Stereo Flam Delay
	03H	09H = Ducking Delay
	03H	0AH = Backwards Delay
	03H	0BH = Tremolo
	03H	0CH = Amp Tremolo
	03H	0DH = Auto Pan
	03H	0EH = Phaser
	03H	0FH = Vibratone
	03H	10H = Pedal Wah
	03H	11H = Touch Wah
	03H	12H = Sine Chorus
	03H	13H = Triangle Chorus
	03H	14H = Sine Flange
	03H	15H = Triangle Flange
	03H	16H = Delay+Chorus
	03H	17H = Delay+Flange
	03H	18H = Delay+Phaser
	03H	19H = Auto Swell+Chorus
	03H	1AH = Ultra-Clean+Chorus
	03H	1BH = Pitch Shift
	03H	1CH = Ring Mod+Delay
	03H	1DH = Auto Pan Delay
	03H	1EH = Fuzz
	03H	1FH = Resolver
	03H	20H = Pedal Pitcher
	03H	21H = Overdrive
	03H	22H = Alienator
	03H	23H = Pedal Wah+Delay
	03H	24H = Touch Wah+Delay
	03H	25H = Fuzz+Pedal Wah

Continued on next page

Parameter IDs and Values - *Continued from previous page*

PARAMETER	ID	VALUE
Effects Type *(continued)*	03H	26H = Fuzz+Touch Wah
	03H	27H = Fuzz+Delay
	03H	28H = Octave+Tape Echo
	03H	29H = Mid Boost+Tape Echo
	03H	2AH = Overdrive+Tape Echo
Reverb Type	04H	00H = Small Room
	04H	01H = Large Room
	04H	02H = Small Hall
	04H	03H = Large Hall
	04H	04H = Arena
	04H	05H = Small Plate
	04H	06H = Large Plate
	04H	07H = Blackface Reverb
	04H	08H = Gated Reverb
	04H	09H = Small Ambience
	04H	0AH = Fender Reverb
Timbre	05H	00H = None
	05H	01H = Full Body
	05H	02H = Razor Edge
	05H	03H = Bright & Light
	05H	04H = Bass Booster
	05H	05H = Drop Scoop
	05H	06H = Super Bright
	05H	07H = Squawk
	05H	08H = Acoustic Scoop
Speaker Phase	06H	00H = Standard Polarity
	06H	01H = Reverse Polarity
	06H	02H = Left Rev Polarity
	06H	03H = Right Rev Polarity
Compressor	07H	00H = OFF
	07H	01H = Low
	07H	02H = Medium
	07H	03H = High
	07H	04H = Even Higher

PARAMETER	ID	VALUE
Noise Gate Depth	08H	0 – 127 (00H-7FH)
Noise Gate Threshold	09H	00H = Low
	09H	01H = Medium
	09H	02H = High
Expression Pedal Assignment	0AH	00H = Volume
	0AH	01H = Gain
	0AH	02H = Treble
	0AH	03H = Middle
	0AH	04H = Bass
	0AH	05H = Presence
	0AH	06H = Reverb
	0AH	07H = Effects Level
	0AH	08H = Effects Val 1
	0AH	09H = Effects Val 2
	0AH	0AH = Effects Val 3
	0AH	0BH = Effects Val 4
	0AH	0CH = Master Volume
	0AH	0DH = Reverb Input
	0AH	0EH = Reverb Tone
	0AH	0FH = Reverb Time
	0AH	10H = Reverb Diffusion
Continuous Controller Assignment	0BH	Same As Expression Pedal
Effects/Reverb Bypass	0CH	00H = FX Input
	0CH	01H = Reverb Input
	0CH	02H = FX Output
	0CH	03H = Reverb Output
	0CH	04H = FX & Reverb Input
	0CH	05H = FX In & Reverb Out
	0CH	06H = FX Out & Reverb In
	0CH	07H = FX & Reverb Out
	0CH	08H = Vibro Fast/Slow

Appendix 5 SysEx ◊ Handshake

Following the guidelines of the MIDI specifications, data is transmitted as follows: First, the System Exclusive Header is sent. The amp will wait 200ms to look for a handshake. If no handshake is received then the amp will transmit the first data packet. The transmission continues until all the information has been sent. After the last packet, the End of File message is sent. The System Exclusive device ID must be set to Omni (or the same as the transmitting device ID) to accomplish the data transfers. **NOTE:** Data values are displayed in hexadecimal with "H" for clarification.

System Exclusive Handshake Message

VALUE	DESCRIPTION
F0H	Start of System Exclusive Message
7EH	Universal Message
nnH	nn = Device ID (minus one)
hdH	Handshake ID (7CH=Wait; 7DH=Cancel; 7EH=Not Acknowledge; 7FH=Acknowledge)
ppH	Packet Number
F7H	End of System Exclusive Message

Appendix 6 Troubleshooting

No sound coming from the unit...

Make sure MASTER, TRIM, GAIN, VOLUME, TREBLE, MIDDLE, BASS and guitar are all above “1.”

Make sure nothing is plugged into the HEADPHONE jack.

Make sure you are not in Tuner mode.

Cannot SAVE a preset...

Make sure Memory Protection is disabled in Utility Mode.

Clean tone sounds distorted...

Turn Trim down if the red LED is constantly on while playing.

Reduce effects loop device levels.

The 3 FX knobs do nothing...

Press the FX button and if “None” is displayed, rotate the data wheel to select an effect.

If connected, press the FX/Reverb Bypass footswitch button.

The 4-Button footswitch does not work...

Make sure it is plugged into the footswitch jack and not a MIDI jack.

An Error message is displayed...

Write down the message exactly as it appears and contact your local Fender® repair center with this information.

The unit is not responding to any MIDI program change messages from external devices...

Make sure the MIDI Receive channel is set properly.

Make sure the MIDI Cables are connected properly.

The unit is not responding to any MIDI Continuous Controller Messages from external devices...

Make sure the MIDI Receive channel is set properly.

Make sure the continuous controller numbers matches the value in the UTILITY menu or is one of the predefined numbers listed in the appendices.

Make sure the MIDI Cables are connected properly.

The unit is not responding to any System Exclusive Information from external devices...

Make sure the System Exclusive Device ID is set properly.

Make sure the MIDI Cables are connected properly.

General MIDI questions...

Visit www.midi.org

Problem still persists after trying these solutions...

Consult an authorized Fender® Service Center or visit www.fender.com or www.mrgearhead.net and click on support.

Appendix 7 Specifications

TYPE:		PR 393	
PART NUMBERS:		2290000010 (120V, 60Hz) USA 2290003010 (240V, 50Hz) AUS 2290005010 (230V, 50Hz) EUR	2290001010 (110V, 60Hz) TW 2290004010 (230V, 50Hz) UK 2290007010 (100V, 50/60Hz) JPN
POWER REQUIREMENTS:		360W	
POWER OUTPUT:		65W per channel (130W total) @ 5% THD	
RATED LOAD IMPEDANCE:		8 ohms per channel	
SENSITIVITY:		adjustable using TRIM control	
PREAMP INPUT IMPEDANCE:		900k ohm	
EFFECTS LOOP		(mono send, stereo return)	
	NOMINAL LEVEL:	-10dBv / +4dBu switchable	
	OUTPUT IMPEDANCE:	220 ohm, impedance balanced	
	INPUT IMPEDANCE:	20k ohm minimum, balanced	
SPDIF LINE OUT JACK:		RCA jack, digital stereo	
XLR OUTPUT JACKS		(stereo / mono switchable)	
	NOMINAL LEVEL:	0dBv	
	OUTPUT IMPEDANCE:	300 ohm, impedance balanced	
TUBE COMPLEMENT:		Groove Tubes, two (2) x 12AX7WC	
SPEAKER COMPLEMENT:		Celestion, Two (2) x G12T-100 (12-inch, 8 ohm)	
FUSES	**PRIMARY:**	F4A 125V for 100V and 120V units, F2A 250V for 230V and 240V units	
	SECONDARY:	digital supply: F2A	analog supply: Two (2) x T1A
FOOTSWITCH	**FOUR BUTTON:**	Quick-access key recall functions, 5-pin DIN (MIDI-type) cord	
	ONE BUTTON:	Reverb/Effects Bypass and Vibratone rotor speed select standard one-button toggle type P/N 099-4055-000 or 00-57172-000	
EXPRESSION PEDAL JACK:		1/4-inch (Tip, Sleeve) analog, compatible with any passive volume pedal, 10k to 250k ohm, (ideal audio taper is 20k 25%)	
REVERB/FX BYPASS JACK:		1/4-inch for connection to the included one-button footswitch	
MIDI JACKS:		IN, OUT, THRU	
HEADPHONES JACK:		1/4-inch stereo	
DIMENSIONS	**HEIGHT:**	18 9/32 in	(46.4 cm)
	WIDTH:	26 1/8 in	(66.4 cm)
	DEPTH:	12 1/8 in	(30.8 cm)
WEIGHT:		55 lb	(25 kg)

Product specifications are subject to change without notice.

P/N 064391 REV A